



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,965	06/25/2003	Toshikane Oda	P16356-US	3713
27045	7590	07/05/2006	EXAMINER	
ERICSSON INC. 6300 LEGACY DRIVE M/S EVR C11 PLANO, TX 75024			DAO, MINH D	
			ART UNIT	PAPER NUMBER
			2618	

DATE MAILED: 07/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/603,965		ODA ET AL.	
	Examiner		Art Unit	
	MINH D. DAO		2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,11-20,23-34 and 38-43 is/are rejected.
- 7) ☒ Claim(s) 3,7,8-10,21,22,35-37 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1,2,4-6,11-20,23-34,38-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Kallio (US 2002/0147008).

Regarding claim 1, Kallio teaches a radio terminal controlling apparatus (see figs. 1-3, AGW 310), comprising: first receiving means for, from a radio terminal having a first communication interface for connecting to a cellular network and a second communication interface for connecting to an internet protocol network (see sections [0010,0024]), receiving a location registration request sent via said second communication interface (see sections [0011,0032]; figs. 1-3. In this case, the AGW 310 of Kallio reads on the receiving means of the present invention.); storing means for storing a correspondence between identification information on said radio terminal and an IP address based on said received location registration request (see sections [0026,0028,0029,0032]. Network Management System 300 and AGW 310 read on the storing means of the present invention.); converting means for, in the case where said location registration request is not in compliance with a standard of said cellular network, converting the location registration request into a location registration message

in compliance therewith (see section [0032]); and first sending means for sending to the cellular network the location registration message in compliance with the standard of said cellular network (see section [0032]).

Regarding claim 2, Kallio teaches the radio terminal controlling apparatus according to claim 1, further comprising determination means for determining whether or not the identification information on the radio terminal which is a subject of a search is stored in said storing means (see sections [0028,0029,0032,0033]).

Regarding claim 4, Kallio teaches the radio terminal controlling apparatus according to claim 2, further comprising transfer means for, on receiving a call set-up request from a first radio terminal to a second radio terminal, having said determination means perform a determination process as to the second radio terminal, and in the case where it is determined that the identification information on said second radio terminal is stored, reading an address of the second radio terminal and transferring the call set-up request to the read address as its destination (see sections [0026,0028,0029,0032]).

Regarding claim 5, Kallio teaches the radio terminal controlling apparatus according to claim 1, wherein said storing means also stores the correspondence between an IP address of the radio terminal controlling apparatus controlling said radio terminal and the identification information on said radio terminal (see sections [0026,0028,0029,0032]).

Regarding claim 6, Kallio teaches the radio terminal controlling apparatus according to claim 2, further comprising transfer means for, when receiving a call set-up request from a first radio terminal to a second radio terminal, reading the IP address of the radio terminal controlling apparatus controlling said second radio terminal and transferring said call set-up request to the read IP address as its destination (see sections [0026,0028,0029,0032]).

Regarding claim 11, Kallio teaches a radio terminal controlling apparatus, comprising: receiving means for receiving, via an Internet protocol network, a first location registration request for registering a radio terminal of a first cellular network with a second cellular network existing in an area different from the area in which the radio terminal exists (see sections [0011,0032]; figs. 1-3. In this case, the AGW 310 of Kallio reads on the receiving means of the present invention.); selecting means for selecting a location registration auxiliary apparatus for aiding the location registration with said second cellular network based on said first location registration request; and transferring means for transferring said first location registration request to said selected location registration auxiliary apparatus (see figs. 1-3; sections [0028,0032]). In addition, the Intranet Location Register 320 of Kallio, which is well known to handle location registering between networks at different areas, reads on the location registration auxiliary apparatus of the present invention.

Art Unit: 2618

Regarding claim 12, Kallio teaches the radio terminal controlling apparatus according to claim 11, wherein a standard with which said first cellular network is in compliance and a standard with which said second cellular network is in compliance are different (see sections [0032,0033]).

Regarding claim 13, Kallio teaches the radio terminal controlling apparatus according to claim 11, wherein a region in which said first cellular network exists and a region in which said second cellular network exists are different (see figs. 1-3; sections [0010,0032,0033]).

Regarding claim 14, Kallio teaches the radio terminal controlling apparatus according to claim 11, wherein a country in which said first cellular network exists and a country in which said second cellular network exists are different. (see figs. 1-3; sections [0010,0032,0033]). The intra network location registration between different wireless networks of Kallio also reads on the limitation of claim 14 as mentioned above.

Regarding claim 15, Kallio inherently teaches that radio terminal is registered with said first cellular network before roaming or being handed over to another network.

Regarding claim 16, Kallio teaches the radio terminal controlling apparatus according to claim 15 further comprising communication controlling means for controlling a communication state of said radio terminal, in the case where said radio terminal is registered with both of said first and second cellular networks. (See section [0035]; figs. 2-5).

Regarding claim 17, Kallio inherently teaches a controlling means to control the activities between the wireless networks including software to inform networks the status of each other (i.e. busy, available).

Regarding claim 18, Kallio teaches a location registration auxiliary apparatus for communicating with a radio terminal controlling apparatus according to claim 11, comprising; converting means for converting said first location registration request received from said radio terminal controlling apparatus into a second location registration request in compliance with the standard of said second cellular network', and sending means for sending said second location registration request to a location registration register of said second cellular network (see section [0032]). Since the ILR 320 of Kallio is capable of connecting location registration between wireless networks at different areas, it inherently is capable of converting the format of each network so that the networks can compatibly function.

Art Unit: 2618

Regarding claim 19, Kallio teaches the location registration auxiliary apparatus according to claim 18, further comprising a conversion table for converting the first message in compliance with the standard of said first cellular network into the second message in compliance with the standard of said second cellular network see (section [0032,0033]).

Regarding claim 20, Kallio teaches the location registration auxiliary apparatus according to claim 18, further comprising a virtual terminal unit operating in compliance with the standard of said second cellular network (see section [0032,0033]). The ILR 320 of Kallio also reads on the virtual terminal of the present invention.

Regarding claim 23, the claim includes the limitations as that of claim 15, and therefore is interpreted and rejected for the same reason set forth in the rejection of claim 15.

Regarding claim 24, Kallio teaches a radio terminal, comprising: a first communication interface for connecting to a cellular network; a second communication interface for connecting to an Internet protocol network; first message generating means for generating a first location registration message for registering with said cellular network; second message generating means for generating a second location registration message based on said first location registration message; and sending controlling means for, controlling said first communication interface to have said first location registration message sent when registering with said cellular network via said first

communication interface, and controlling said second communication interface to have said second location registration message sent when registering with said cellular network via said second communication interface and said Internet protocol network (see figs. 2-5; sections [0010-0012]).

Regarding claim 25, Kallio teaches the radio terminal according to claim 24, wherein said radio terminal further comprises: first measuring means for measuring first signal quality based on a signal received by said first communication interface; second measuring means for measuring second signal quality based on the signal received by said second communication interface; and comparing means for comparing said first signal quality with said second signal quality; wherein the communication interface for sending the location registration message is determined according to results of said comparison (see sections [0035,0036]).

Regarding claim 26, Kallio teaches the radio terminal according to claim 24, wherein said second communication interface is a wireless interface for radio-communicating with said Internet protocol network (see figs. 2-5; sections [0010-0012]).

Regarding claim 27, Kallio teaches the radio terminal according to claim 26, wherein said wireless interface includes any one of an infrared interface, a wireless LAN interface and a Bluetooth interface (see section [0010-0012]).

Art Unit: 2618

Regarding claim 28, the claim includes the limitations as that of claim 1, and therefore is interpreted and rejected for the same reason set forth in the rejection of claim 1.

Regarding claim 29, the claim includes the limitations as that of claim 2, and therefore is interpreted and rejected for the same reason set forth in the rejection of claim 2.

Regarding claim 30, Kallio teaches the radio terminal controlling method according to claim 29 further comprising a step of, in the case where it is determined that the identification information on said radio terminal which is the subject of the search is not stored, sending a search request including the identification information on the radio terminal which is the subject of the search (see sections [0028, 0029, 0032, 0033]).

Regarding claim 31, the claim includes the limitations as that of claim 4, and therefore is interpreted and rejected for the same reason set forth in the rejection of claim 4.

Regarding claim 32, the claim includes the limitations as that of claim 5, and therefore is interpreted and rejected for the same reason set forth in the rejection of claim 5.

Regarding claim 33, the claim includes the limitations as that of claim 6, and therefore is interpreted and rejected for the same reason set forth in the rejection of claim 6.

Art Unit: 2618

Regarding claim 34, Kallio teaches the radio terminal controlling method according to claim 30, wherein said radio terminal which is the subject of the search is the second radio terminal on receiving the call set-up request from the first radio terminal to the second radio terminal, and said call set-up request is converted and said converted call set-up request is sent to said cellular network in the case where the identification information on the second radio terminal is not stored. (see sections [0028,0029,0032,0033]).

Regarding claim 38, the claim includes the limitations as that of claim 11, and therefore is interpreted and rejected for the same reason set forth in the rejection of claim 11.

Regarding claim 39, the claim includes the limitations as that of claim 12, and therefore is interpreted and rejected for the same reason set forth in the rejection of claim 12.

Regarding claim 40, the claim includes the limitations as that of claim 13, and therefore is interpreted and rejected for the same reason set forth in the rejection of claim 13.

Regarding claim 41, the claim includes the limitations as that of claim 24, and therefore is interpreted and rejected for the same reason set forth in the rejection of claim 24.

Regarding claim 42, the claim includes the limitations as that of claim 25, and therefore is interpreted and rejected for the same reason set forth in the rejection of claim 25.

Regarding claim 43, the claim includes the limitations as that of claim 26, and therefore is interpreted and rejected for the same reason set forth in the rejection of claim 26.

Allowable Subject Matter

3. Claims 3,7,8-10,21,22,35-37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 3, Kallio, as mentioned above, teaches the limitations of claim 2, but fails to teach that the radio terminal controlling apparatus according to claim 2, further comprising search request means for, in the case where it is determined that the identification information on said radio terminal which is the subject of the search is not stored in said storing means, sending a search request including the identification information on the radio terminal which is the subject of the search to another radio terminal controlling apparatus as specified in the claim.

Regarding claim 8, Kallio, as mentioned above, teaches the limitations of claim 1, but fails to teach that the radio terminal controlling apparatus according to claim 1, further comprising second sending means for sending to the radio terminal having its identification information stored in said storing means a location registration prompting

Art Unit: 2618

message for prompting location registration based on a sending cycle according to the standard of said cellular network as specified in the claim.

Regarding claim 21, Kallio, as mentioned above, teaches the limitations of claim 20, but fails to teach that the location registration auxiliary apparatus according to claim 20, wherein said apparatus further comprises; activating means for activating said virtual terminal unit on receiving said predetermined message; and assigning means for assigning unique information to said virtual terminal unit which is activated, and said virtual terminal unit generates a third location registration request for registering said virtual terminal unit with said second cellular network by using said unique information, and sends it to said location registration register as specified in the claim.


Regarding claim 35, Kallio, as mentioned above, teaches the limitations of claim 28, but fails to teach that the radio terminal controlling method according to claim 28, further comprising a step of sending to the radio terminal having said identification information stored a location registration prompting message for prompting location registration based on a sending cycle according to the standard of said cellular network as specified in the claim.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MINH D. DAO whose telephone number is 571-272-7851. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MATTHEW ANDERSON can be reached on 571-272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Minh Dao 
AU 2618
June 21, 2006


Matthew Anderson
Supervisor AU 2618